

Conservation and development of local forest resources and wildlife through community forestry: a case study from Baghmara community forest, Chitwan

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A study was carried out during autumn 2001 at Baghmara community forest located at the buffer zone of Royal Chitwan National Park. The main aims of the study were to: i) find out the level of participation of user group members towards community forest management, and ii) assess the perception of user group members towards the current management practices. Data were collected through primary and secondary sources. Most of the user group members were found satisfied (98%) with current management practices and 99% members have positive perception towards Baghmara community forest. The people's participation for community forest management was quite high and more than 80% members were satisfied with the current fuel-wood distribution practice. The involvement of one or two persons from each household in management and fuel-wood collection and provision of alternatives for sustaining livelihood who solely depend on forest products are recommended.

Key words: Baghmara, community forest, users groups, participation, perception

Baghmara community forest is located within the Bachhauli Village Development Committee (VDC), Chitwan district of central lowland Nepal. The high influx of tourists in Royal Chitwan National Park (RCNP) during early eighties, and dependence of local communities solely for infrastructure development and energy needs put heavy pressure on local forest resources. Previously the Baghmara community forest was popular for airstrip and for tiger hunting. The increasing population pressure caused rapid degradation of natural forest cover and heavy grazing affected the palatable grasses gradually.

The land encroachment from the immigrant people gradually reduced the forest area. To tackle with these problems, concerned local residents of the area get united to manage the remaining forest. From active participation, enthusiasm and demand of the local people, with technical and financial assistance of King Mahendra Trust for Nature Conservation (KMTNC) and World Wildlife Fund (WWF), Community Forest (CF) was established in the area with twin objectives: Firstly, to motivate local people towards conservation by meeting their vital basic needs like fodder and

fuelwood through community forest programme and secondly, offset existing pressure on the national park and create a positive attitude towards biodiversity conservation. Now, the active users of this CF have been able to increase the total forest area to 400 hectares.

There are four plantation sites in this community forest. The first (32 ha, 1989) and second (20 ha, 1990) plantation was established from the financial support of WWF-US, whereas the third (250 ha, 1995), and the fourth (50 ha, 1996) were from the support of Bio-diversity Conservation Network. Besides that, 30 ha of land are managed as grassland with financial assistance from WWF Nepal Programme. The remaining 20 of ha land is using as grazing ground for livestock. In 1995 the forest was handed over to the Users' Group (UG) for its management. The UG after a decade long conservation initiations have gained lot of experiences towards community forest management. This study aims to find out the level of participation and perception of UG members towards Baghmara community forest management.

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Materials and methods

Study sites

It lies between 27°34.78'-27°35.53' N and 84°28.43'-84°29.40' E, in the subtropical region of lowland Nepal. The Baghmara community forest has borders with cultivated land in the east, Budhi Rapti in the west and north and Bodreni village and Rapti River in the south.

Local residents of Bachhauli Village Development Committee (VDC), ward number 1 to 4 are the members of users' group. There are a total of 779 households and 4,546 people (50.9% men and 49.1% women) in the users' group (Baghmara community forest work plan 2002). Local indigenous people, *Tharu* constitutes 57.84% of the population. The population ratio of other ethnic groups is 21%, 16.67% and 4.49% of *Mangol*, *Brambin/Chhetries* and others respectively. Among them, 93.5% people are permanent residents, and remaining 6.5% are frequent visitors.

There are 9,590 livestock in the users group of this community forest. The major livestock are cattle 3.2%, buffalo 8.6%, ox/male buffalo 4.7%, goats/sheep 14.2%, chicken/ducks 39.7% and others 29.3%. Among the cattle and buffaloes, 78.7% are grazed and 21.3% are stall feeded.

The Baghmara Community forest is located in the sub-tropical region with evergreen riverine forest. The plantation area predominantly consists of Sissoo (*Dalbergia sissoo*) with some Khair (*Acacia catechu*), fodder species and Teak (*Tectona grandis*). Padke (*Albizia spp*), Vellor (*Trevis nudiflora*), Simal (*Bombax ceiba*) and Kutmiro (*Litsea monopetala*) are the main species occurred in the natural forest. Except few sites along the riverbeds, all grasslands are dominated by Siru (*Imperata cylindrica*). In Baghmara community forest 104 species of plants (including endangered *Butea monosperma*), more than 20 species of mammals (including endangered Tiger and Rhino) and 125 species of birds were recorded (KMTNC 1997).

Research methods

The study was carried out in Baghmara community forest, which lies in buffer zone of Royal Chitwan National Park. The data and information were

collected through methods like questionnaire survey, semi-structured interview, key informant's interview, and direct observation. Similarly, secondary data were collected through extensive review of previous research findings and other related literature.

Sampling techniques: The data were collected from users' group members of Baghmara community forest. Three east west transect were established for sampling in the study area. Roads and trails travelling east west were given priority for transect establishment. The data were collected at the alternative of five households along these transects. The research tools used in this study were:

Questionnaire survey: Structured questionnaire were used to get necessary information. The questionnaire mainly concentrated on the forest management, people's participation and perception towards community forest. Specific questionnaire were also used to get information from key informants. Altogether 99 households were interviewed.

Semi-structured interview: This was an open discussion with open-ended questions. The issues dealt with during the interview were mainly on their opinion on community forest management as well as the local peoples participation in forest management. This method was used to generate valuable information from workers and occupational castes of Baghmara community forest users' group. In addition, the facts that have possibly escaped during formal interviews have been compensated.

Key informant interview: Except users group members the peoples who are directly or indirectly involved in community forest from the initial phase were considered as key informants. Those were VDC members, government officials, and personnel from non-governmental organizations and migrants. Altogether 33 key informants were interviewed using structured questionnaires.

Direct observation: During the study period, events like users group meetings and discussions related to the community forest management were carefully observed. The observation was also made on the forest management operations like demarcation of the forestland, plantations, grazing areas and other protective measures carried out by the community.

Table 1: Activities and people's participation in Baghmara community forest management

Activities	UG members involved (%)
General assembly/fuel-wood collection and conservation activities	68.6
General assembly/ meeting/ fuel-wood collection and conservation activities	11.1
Fuel-wood collection and conservation activities	8.1
General assembly/meeting and conservation activities	2.1
General assembly and fuel-wood collection	2.1
General assembly and conservation activities	1.0
Fuel-wood collection	2.0
Conservation activities	1.0
Not involved in any activities	4.0

Source: Household survey 2001

Results and discussion

People's participation

Most of the users group members were aware about community forest's activities. The people's participation level in community forest activity was found very high (Table 1). There is no doubt that the active participation of user group members have resulted today's Baghmara community forest. The contribution of users towards plantation, conservation and management of this forest is significant. Users were happy with their success in creating forest cover in almost bare grazing land. They were now also contributing in other conservation and management activities like weeding, thinning, pruning and clearing. Most of the user group members (84.7%) have actively participated in general assembly and contributed their labour and time in conservation and management activities like barbed wire fencing, construction of water holes and trench making.

Users perception

Initially the local people had negative attitude towards Baghmara community forest. The lack of awareness was the major problem during that time. The local people perceived that they would lose their rights of grazing, and fuel-wood and fodder collection. Some politically motivated people also tried to make the community forest land as their private property. These people also motivated some of the user group member against the community forest. But, when people started getting benefits from this forest, their perception and attitude also began to change. Large number of people participated and contributed their labour to establish the community forest (personal communication, UGC Chairman).

At present, almost all (99%) user group members were found positive towards this community forest and were satisfied with the community forestry activities, as they understand its long-term benefits. Local people were getting benefits from community forest in various ways. A separate area is allocated for grazing from where people collect grass. Furthermore the eco-tourism inside the forest has become a major source of income. The income raised from community forest has been mobilized in various community development and economic upliftment activities such as school, bridge and check dams construction, road gravelling, income generating activities, biogas construction, Improved Cooking Stoves (ICS) and support for toilet construction.

Although most of the user group members (99%) were supportive towards community forest management, some members express lack of information and technical assistance for the forest management. They expressed that the Baghmara community forest users group committee, under existing work plan, was powerful institute for decision making in forest management activities. However, it was found that the users group committee consults concerned people and conservation oriented organizations during decision-making process.

Satisfaction level

In the resource conservation and management issue all the users group are united with a common voice. Nearly 98% of the respondents were satisfied from current community forest management practices. They felt that community forest is better than open access because users group have right to manage and use its product. They could make their own decision